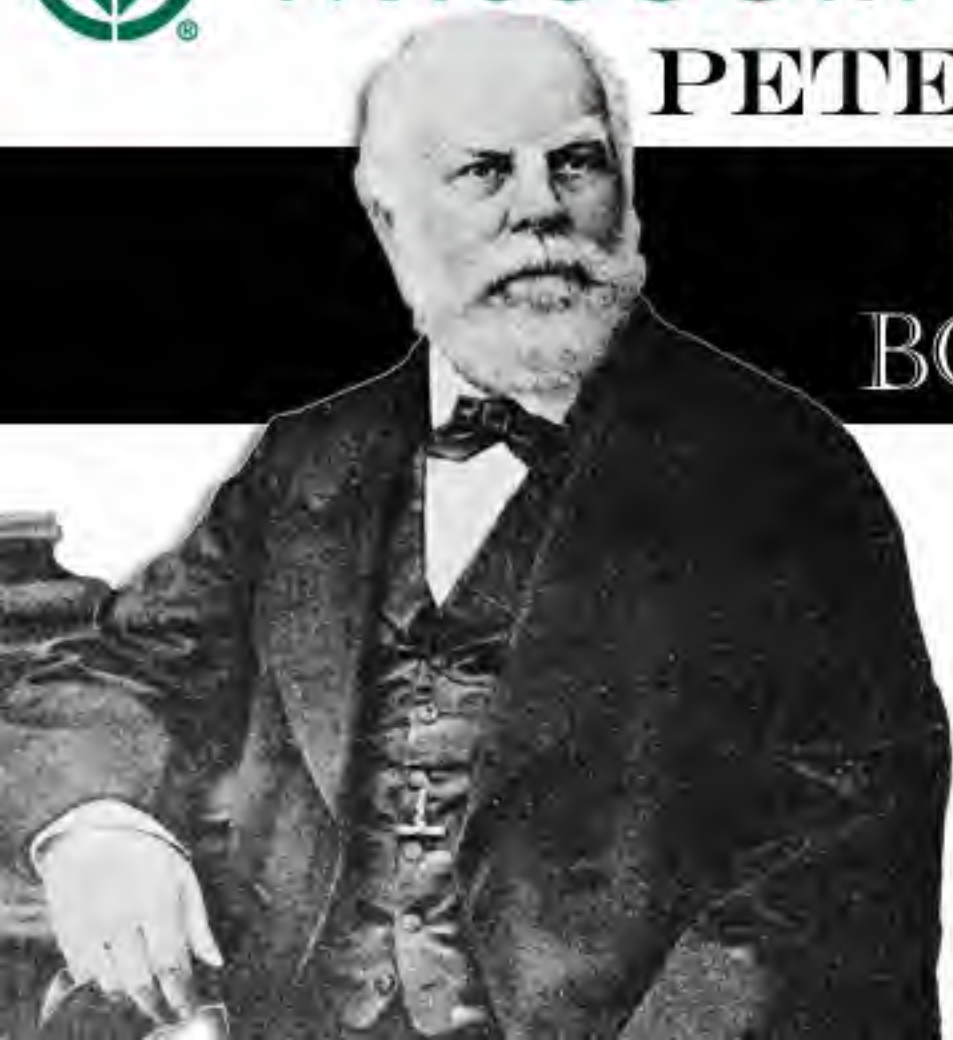


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GEORGE ENGELMANN
BOTANICAL NOTEBOOKS



Pagination Note:

Since many of the items lack a specific page number, the page number displayed online refers to the sequentially created number each item was given upon cataloging the materials.

Show Tulips.

Purchaser's selection	each.	s. d.
—	—	3
—	per dozen	2 "

1169. **Absalon.** Light slate violet, flaked with pure white and blackish purple, a superb variety.
1129. **Andromeda.** Carmine, delicately striped with pure white.
1079. **Belle Virginie.** Snow white, flaked with deep violet and marbled with black.
1168. **Bienfait incomparable.** White, finely striped with maroon, a blood red reflex on the edges; a vigorous variety.
1049. **Empereur Napoléon.** Large, of good form, pure white, striped with purple.
1003. **Feu de Lille.** Lemon yellow, flaked with deep red and mahogany brown.
1070. **Fidès.** Cherry red, striped with pure white.
1165. **Globe terrestre.** Very large, white and yellow, flaked and striped with carmine on the edges.
1172. **Globertine.** White, finely striped with purple, with a cherry red reflex.
1167. **Gloria mundi.** Beautiful canary yellow, slightly flaked with mahogany brown; a vigorous variety.
1041. **Jacqueline.** Lilac, flaked with white and deep purple.
1055. **La circassienne.** White with a canary yellow reflex, striped with blood red and shaded with carmine, large.
1164. **La guerre.** Of perfect form, white, flaked and marbled with violet and deep purple.
1166. **La sultane.** Large, pure white, slightly striped and flaked with carmine.
1170. **Le soleil.** Straw yellow, flaked with blood red carmine, handsome.
1133. **L'Étoile Belge.** White, flaked with mahogany brown and shaded with violet.
1060. **Liévin Bauwens.** Straw yellow, slightly flaked with deep violet, with a mahogany brown reflex.
1058. **Lisette de Béranger.** Of very good form, lemon yellow, flaked and marbled with mahogany brown.

var. *abilis* E

leaves = 2nd or 3rd

flower scales = 2nd or 3rd

inner of scales contrasted to stippled at base

(see orig. copy)
2. *Andromeda*

and rough or smooth

3

leaves or more

Parry

Wright 1882

1883

part

Parry 1884

(1882)

248

Calif. Cooper

1861

86 7-8/10



0 1 2 3 4 5 6 7 8 9 10

cm

copyright reserved



MISSOURI
BOTANICAL
GARDEN

И. — ПИО МАМА

bulbs	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
100	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
50	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
25	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
12	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

ASSORTMENT I. — Fine mixture of varieties with white ground (*rose and violet*) and yellow ground (*bizarres*) :

bulbs	100	50	25	12
6	6	6	6	6
3	3	3	3	3
1	1	1	1	1

6th SERIES.

EARLY DOUBLE-FLOWERED TULIPS.

The flowering season of these Tulips is at the same time as the early single-flowered Tulips and are adapted for forcing in pots.

N ^o	Height in centim.	Each. s. d.	Per cent. s. d.
432.	0,35 Couronne de roses (FLORE, XVI, 143). Bright satiny rose, very double and magnificent	2 "	12 10
446.	0,30 Duc de Bordeaux . Brown red, edged with yellow.	2 "	12 "
440.	0,30 Duc d'York . Red, edged with nanken yellow, very double . "	1 "	4 10



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cm

MISSOURI
BOTANICAL
GARDEN

see over for specimens

exsert
fruit single (rarely 2)
rough

Ephedra viridula

2-3 leaves

♀ 5-6 pairs or verticils (3) of rough ^{denticulate} scales

innermost continued at base and united

at insertion
only with base itself

♂ anthers 5-6 subsessile, ^{or short stalked} scales
in pairs or 3^d

lowest - verticil sterile

Only sp with 2 or 3 leaves or scales

near Oregon

Oregon has always leaves in pairs & smooth fruit

var. *viridula* - - - 2 & 3 - rough fruit

but there are other intermediate ones, leaves 2 & 3 & 8
El Paso Arizona & Oregon smooth fruit



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cm

copyright reserved



MISSOURI
BOTANICAL
GARDEN

Frontera, Wright 1851 N 1882

13427

1883

— — —
— Parry 1852

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS



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cm

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MISSOURI
BOTANICAL
GARDEN

11

It is specially among the double Hyacinths that varieties are met with which never produce but small bulbs; unfortunately, all purchasers are not aware of this; hence they believe themselves badly served, if, on examining the bulbs they have received, some are found to be small. When planting, we strongly recommend those who are unaware of this, to specially mark the small ones, and they will find, at the period of flowering, that the size of the bulb has not, in any way, influenced either the dimension of the spike, or the beauty of the flowers; the sorts, in the following list, to which the figure (L) is attached, are those which produce the largest bulbs; those marked (S) produce the smallest bulbs.

N ^o		s. d.
502.	* A la mode. <i>Pale blush</i> , lilac eye, bells very double, reflexed	5
503.	* A la mode. <i>Porcelain blue</i> , tinted with grey and striped with violet.	"
504.	Albion. Very double, large pyramidal truss, deep blue with slate reflex; a late-flowering variety	5
506.	* Alida Catharina. Delicate satiny rose, as double as the finest Delphinium; a very early variety, admirable.	5
507.	* Anna Maria. White with violet centre, lobes tipped with green (L).	5
525.	Baron von Rothschild. Very bright red, large, very double	5
540.	* Blanchard. Pure white, pretty truss.	10
530.	* Bloksbergen. Pale porcelain blue, large bells and truss, fine (L)	8
532.	Bouquet orange. Pale nankeen, shaded with rose, very peculiar (L).	5
534.	Bouquet royal. (FLORE, XII, 91). White, shaded with <i>pink</i> , dark centre, very fine (L)	6
529.	Bouquet royal. Large, fine pure <i>white</i>	4
536.	* Bouquet tendre. Rich red, finely proportioned truss (L).	8
537.	Bride of Lammermoor. Fine blue with violet eye, superb truss.	4
546.	* Carl Kroonprins von Schweden. Greyish blue, fine pyramidal truss.	5
548.	* Cochonille or Éclipse. Very bright carmine; a charming variety (S).	5
549.	* Cœur fidèle. Pale pink with violet eye, very double, fine truss	5
552.	* Comte de St-Priest. Pale porcelain blue with lilac reflex; a very effective variety	5

2

wright H May
1883 - part
El Paso Bulb Co
St George Perry
250

571-4
P. Torreyana Wabner - part 3

Wabner, Perry



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MISSOURI
BOTANICAL
GARDEN

698.	*Jenny Lind.	Pure white with purple eye,	1	3
696.	Jonathan.	Fine, semi-double, rose	1	3
697.	*Joséphine.	Very large, handsome bright pink	1	3
706.	Koh-i-Noor.	Extremely bright rose, very large pyramidal truss (L).	3	10
738.	*L'abbé de Veillac.	Light blue, very double	1	3
722.	*La belle alliance.	Rose, tipped with green, bells finely imbricated	1	8
724.	*La déesse.	Pure white, large truss	1	1
726.	*La Tour d'Auvergne.	Pure white; a very early variety (L)	5	5
727.	*Laurens Koster.	Deep blue, shaded with violet; a very effective and very fine variety	5	8
745.	*La virginité.	Pure white, large bells and truss.	5	5
750.	L'élégance.	Dark red, beautiful well-garnished spike	5	5
728.	*L'espérance.	Pretty rose with nankkeen reflex; an early variety (S).	10	10
729.	Lieutenant Waghorn.	Deep red, very large bells and spike	4	4
741.	Lord Palmerston.	Grand spike, very fine slate blue	10	10
733.	*Lord Wellington	(FLORE, XIV, 185). Tender rose, immense bells, admirably formed truss, very fine	1	8
734.	*Lord Wellington.	Very fine blue, lilac corolla, medium truss	6	6
735.	*Louis d'or.	Pretty nankkeen yellow (S).	5	5
736.	*Louis-Napoléon.	Fine deep red, pyramidal truss	6	6
746.	*Louis-Philippe.	Porcelain blue, large and handsome bells	1	3
778.	*Madame Marmont.	Azure blue, delicately shaded with white	1	8
780.	*Maria Louisa.	Rose, well-formed bells, beautiful truss	6	6
784.	*Mathilde.	Beautiful, delicate rose; a very early variety	5	5
786.	*Mignon de Dryfhout.	Violet lilac, fine truss, of good size (L)	5	5

Ephedra Torreyana Wats. Kanab S. Utah

Wm Thompson 1872

Santa Fe, New Mexico

Cotton woods near El Paso Arizona

Frederick W. W. 1883 - part

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

♀ 5-8 verticils of scales, scales very thin, membranous,
smooth denticulate - orbicular or reniform,
striated. convolute 2/3 in 3/4 upper verticils equal,
1-3 more or less rough nerved tapering
(young ones) not so strongly exserted

♂ scales in 3' orbicular, contracted at base,
denticulate - perian narrow, cuneiform,
enclosed, often 5-7 slightly



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MISSOURI
BOTANICAL
GARDEN

Epilobium boreale L. Karst. J. M. H. 1842
1842
Butch. J. M. H. 1842
Cott. 1842 near Bl. 1842
Foster. 1842 - 1842

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

Epilobium boreale L. Karst. J. M. H. 1842
Butch. J. M. H. 1842
Cott. 1842 near Bl. 1842
Foster. 1842 - 1842



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Phedra Torringtonia Wilson

June 17 1882

South Wh. Parry, 1874 No. 250

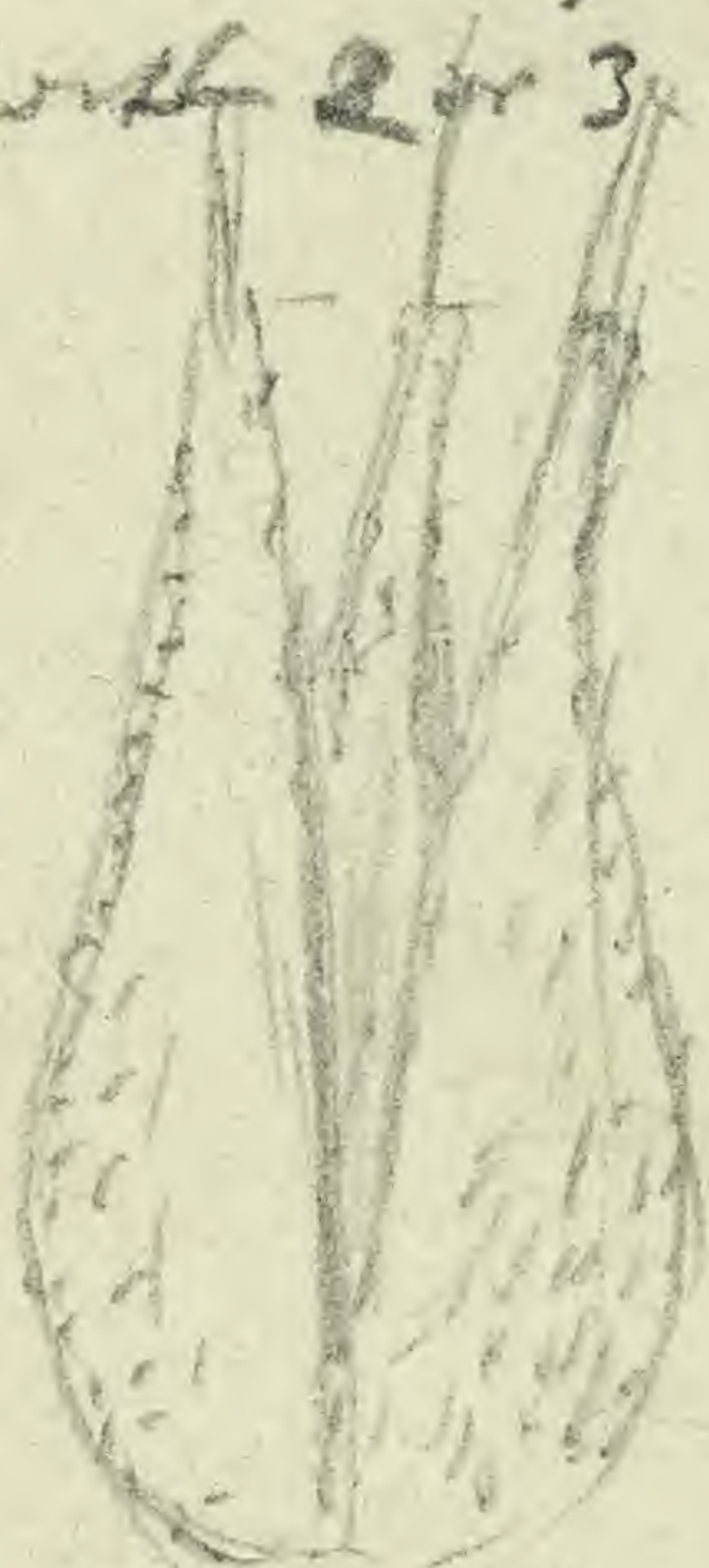
alkaline soil

♀ 8 verticils of 3 bracts (24)
length 2 or 3, very small

x4



inner scales



3 pistils

x4



6-7-8 phod
slipster anthers

sheath as long

as bract

not exserted at all
bract contracted at base

lower pairs of bracts ciliate

small; - bracts evanescent

then 2 empty verticils of 3,
after that fertilous



♂

small

globose

x4



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GARDEN

13430

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

ALEX. LEITCH,

APOTHECARY & PHARMACEUTIST,

Marble Building Cor. Fourth & Olive Sts. St. Louis, Mo.



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MISSOURI
BOTANICAL
GARDEN

Paris 1385

22

LOUIS VAN HOUTTE'S CATALOGUE (1879-80).

11th SERIES.SUNDRY TULIPS. — *Botanical species.*

N ^o	Height in centim.		Each. s. d.	Per dozen. s. d.
4272.	0,30	<i>carinata rubra</i> . Beautiful red	" 3	2 "
4273.	0,30	<i>Clusiana</i> . Flower widely distended, exterior rose, interior and edges transparent white	" 5	4 "
4274.	0,50	<i>cornuta (stenopetala)</i> . Yellow lanceolated petals with red tips.	" 2	1 3
4277.	0,30	<i>Elchlerl</i> . Dazzling red	1 8	" "
4279.	0,50	<i>Morentina</i> . Lemon yellow, delightful violet-scented	" 3	2 "
4280.	0,30	<i>fulgens</i> . The most bright brilliant red	" 3	2 "
4283.	0,45	<i>Gesneriana (hortensis)</i> . Bright crimson with pansy blue eye.	" 2	1 3
4284.	0,30	<i>Greisl</i> . Orange red with black and yellow eye, leaves spotted with dark brown	2 6	" "
4285.	0,30	<i>Kolpakowskiana lutea</i> . Yellow	3 3	" "
4286.	0,30	— <i>rubra</i> . Red	3 3	" "
4287.	0,35	<i>lutea</i> . Fine golden yellow, good form.	" 2	1 3
4288.	0,50	<i>Oculus solis</i> . Vermilion with black eye	" 2	1 3
4290.	0,20	<i>persica</i> . Yellow, sweet-scented.	" 3	2 "
4292.	0,30	<i>retroflexa</i> . Canary yellow	" 3	2 "
4293.	0,40	<i>stellata</i> . White, small, starred	2 6	" "
4294.	0,25	<i>sylvestris</i> . Lemon yellow	" 3	2 "
4296.	0,40	<i>turcaica</i> . Tongue-shaped, laciniated petals, yellow, edged with shiny reddish carmine	" 3	2 "
4298.	0,50	<i>viridinora</i> . Green with whitish reflex; a very curious species.	" 3	2 "

E. spinosa E

0 1 2 3 4 5 6 7 8 9 10

cm

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MISSOURI
BOTANICAL
GARDEN

9th SERIES.

EARLY DOUBLE-FLOWERED TULIPS WITH VARIEGATED LEAVES.

N ^o	Height in centim.		Each. s. d.	Per cent. s. d.
448.	0,30	Duc de Tholl. Red, bordered with yellow, leaves richly edged with a <i>silvery white</i> ribbon	1 3	" "
447.	0,30	Duc de Tholl. Red, bordered with yellow, leaves slightly streaked with <i>golden yellow</i> on the edges	" 5	" "
568.	0,30	Rex rubrum. Scarlet, shaded with carmine, leaves delicately bordered with white	" 3	20 "
543.	0,35	Rose jaune. Beautiful yellow, sweet-scented, leaves bordered with yellow	" 3	16 "
587.	0,30	Tournesol. Red, edged with lemon yellow, leaves slightly streaked with yellow.	" 10	" "

EARLY DOUBLE-FLOWERED TULIPS.

	100	50	25	12
bulbs in fine mixture	—	—	—	—
s. d.	6 6	3 8	2 "	1 3

LATE DOUBLE-FLOWERED TULIPS.



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cm

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BOTANICAL
GARDEN

Ephedra sp. in sp.

June 15 1882

♀ *Muhlenbergia* in Mohave Desert N. 1385

5 x 8 mm

Parish May 1882

x4



3^d verticil
of bracts

18 bracts in
6 verticils



one of the inner
most bracts x4
of 6th verticil
contracted at base,
oval; denticulate crose
on membranous
margin



young seed
angle



lower
verticil of
cup scales

x4



upper

x4

albida!



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MISSOURI
BOTANICAL
GARDEN

A. SZERENYI'S

LEFFINGWELL AVENUE DRUG STORE,

2746 Morgan St., Cor. Leffingwell Avenue.

E. F. SAILOR, PR. ST. LOUIS.

R

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

13432

GEORGE J. ENGELMANN, M. D.,

Office, 411 Olive Street.

Residence, 3003 Locust Street.



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cm

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MISSOURI
BOTANICAL
GARDEN

17

Ephedra

Wright, Frontier

No 1883

part

Dec 11 '82

X4
ex HG Grayone of the
lowest verticils

5-6 verticils

young fruit
single, very roughMISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

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BOTANICAL
GARDEN

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MISSOURI BOTANICAL GARDEN
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cm

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BOTANICAL
GARDEN

Ephedra

Fontaine, Paraguay 1852

June 17 1882

x4



innermost scale
mostly pairs
5 pairs or virtually
lowest very small
gradually larger
scales outside rough

young fruit
as long as scales
rough
single



leaves more frequently in pairs

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

leaves - ♂ - 3'
- ♀ sp. - 2'
or 3'

♂ - 3'

about 5 or 6 fertile and
below 1 sterile verticil of
scales -

sheaths as long as scales
usually about 6 (or 5)
anthers, 5 to 6 late

below the lowest verticil
(of 3) of the ♂ axis is a
pair of scales or bracts
lateral to the supporting bract



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MISSOURI
BOTANICAL
GARDEN

13434

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

Leitch & Corlies

DRUGGISTS

South-west
Corner Fifth
and Market
Streets



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cm

copyright reserved



MISSOURI
BOTANICAL
GARDEN

Ephedra

Salt Lake, Perry

Dec 8 1872

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

a pair of scales
slightly rough
at base



immature
scales contained
at base, almost
free

seed single



seed (mature)
enveloped



stem x60



0 1 2 3 4 5 6 7 8 9 10

cm

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MISSOURI
BOTANICAL
GARDEN

13435

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

**ALEX. LEITCH**
APOTHECARY & PHARMACEUTIST
COR. 4TH & OLIVE STS. ST. LOUIS.



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cm

copyright reserved



MISSOURI
BOTANICAL
GARDEN

♂

Ephedra

Castrovela, Mexico

June 19 1882

S. Gregg 414

x60



stem very rough

x10



connate scales all but the lowest
fertile; sheath exserted
anthers mostly 6, stylis



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MISSOURI
BOTANICAL
GARDEN

Leitch & Corlies

DRUGGISTS

South-west
Corner Fifth and Market
Streets

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

13436



Handwritten notes in cursive script, mostly illegible.



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MISSOURI
BOTANICAL
GARDEN

Ephedra
Sierra Madre

E Palmer 1282

Dec 6 1882

just in flower

x4



sessile

5 pair of scales
and 1 pair of small
bracts at base
scales orbicular



innermost
pair of scales
only united
at contracted
base
strongly overlapping
each other, slightly
rough on back



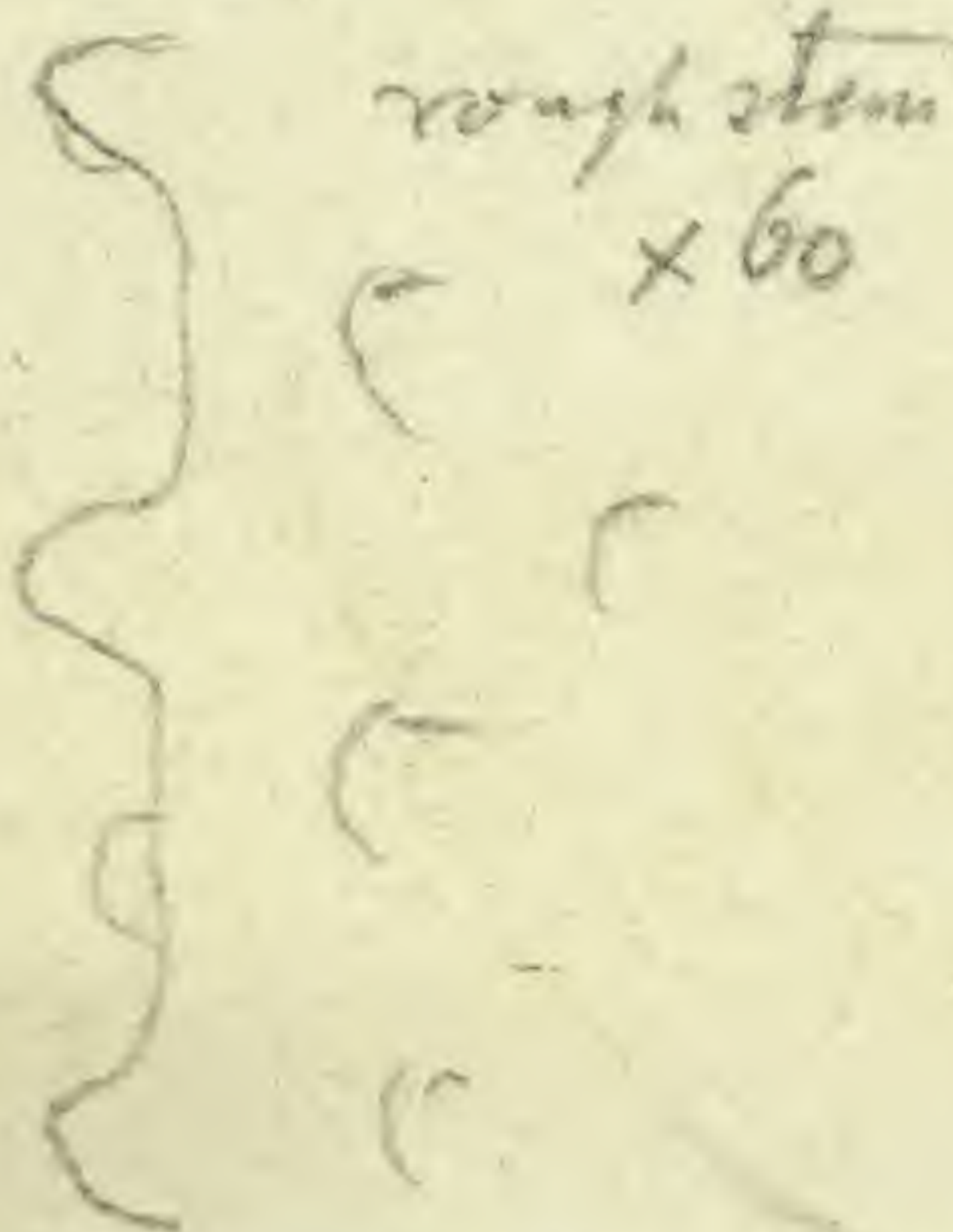
scale
spread out

x4



4-6 stamens

scales orbicular
conspicuous at base
rough on back



rough stem
x60

seed single



x10

6 stamens from
a bud



0

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MISSOURI
BOTANICAL
GARDEN

13437

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

Leitch & Corlies

DRUGGISTS

Corner Fifth and Market
Streets



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cm

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MISSOURI
BOTANICAL
GARDEN

Ephedra
Saltillo, D. Parry 1878

June 19 1882

no number

stem quite rough



4 pair of scales
or 5

single ovule



inner scales
contracted at
base into a broad
stipe; margin thin
membranaceous



x60



0

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8

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10

cm

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MISSOURI
BOTANICAL
GARDEN

13438



Alex. Leitch,
APOTHECARY & PHARMACEUTIST,
COR. 4TH & OLIVE STS., ST. LOUIS.

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS



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GARDEN

Ephedra Californica

Dec 12 1882

nd 2 raded!

San Diego, Calif. Dr. Parry 1882

marked bract and then
apparently 2!



one of the
innermost
scales

6 verticils
scales broadly rhiclor,
overlapping; inner most ones
auriculate, short and broad.
Stiped



0 1 2 3 4 5 6 7 8 9 10

cm

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MISSOURI
BOTANICAL
GARDEN

13439

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS



0 1 2 3 4 5 6 7 8 9 10

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MISSOURI
BOTANICAL
GARDEN

Ephedra Calif

White water desert, Calif

Nov 6 1881
Parrish



x4

carpel
fleshy, bivalved?



ovule
membran.
-arous



embryo



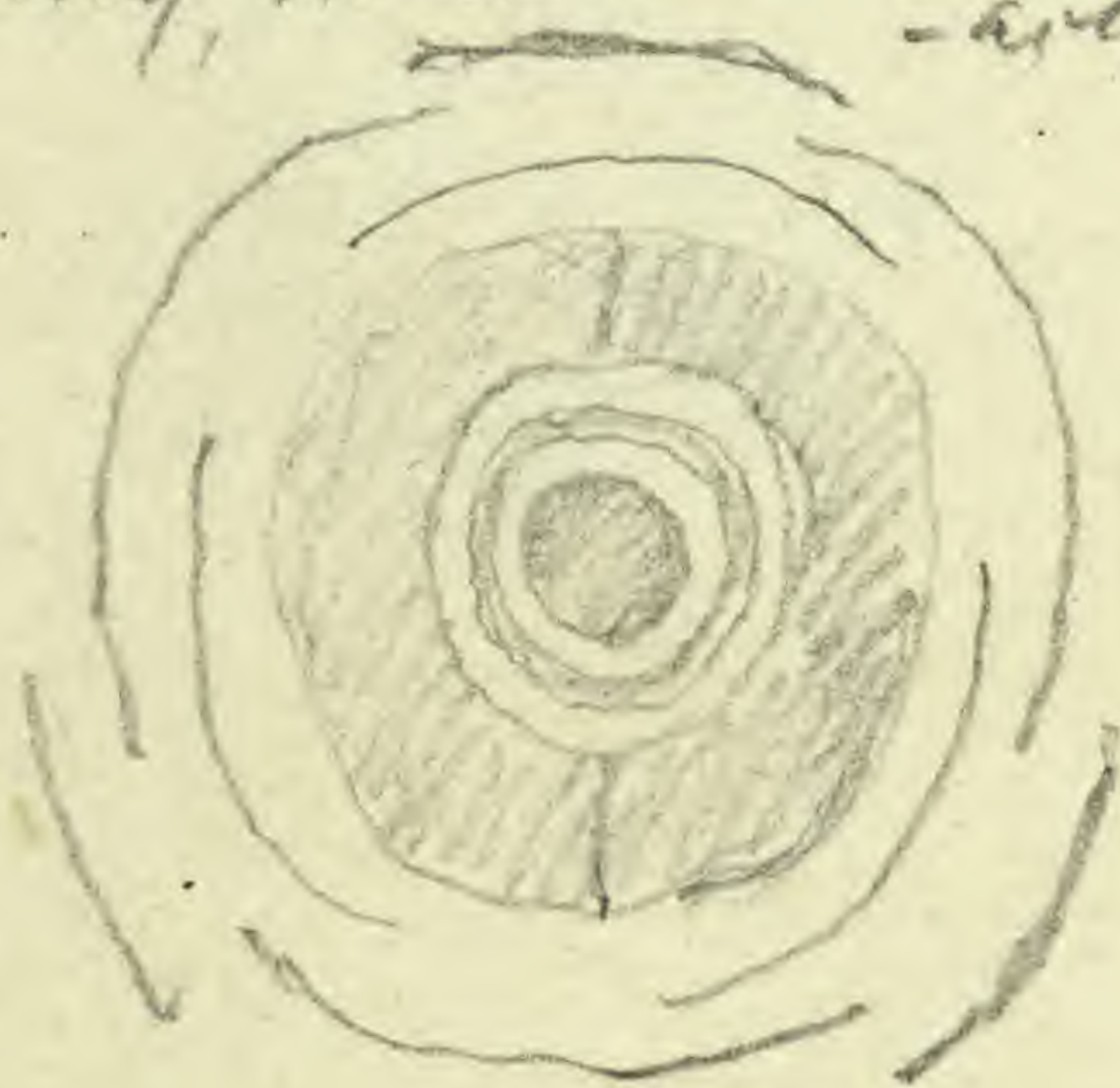
x8



3-5 anthers

the upper 2 or 3 stipitate
lower sessile
perigon enclosed

6 lower scales of ♂ anther
small, sterile, 2 ventrals



split to near
swollen base



old leaves from
white water desert

leaves of older branches
from San Diego



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GEORGE ENGELMANN PAPERS

ALBERT J. LEITCH

APOTHECARY AND CHEMIST.

Marble Building, cor. 4th and Olive Sts.,

ST. LOUIS, MO.



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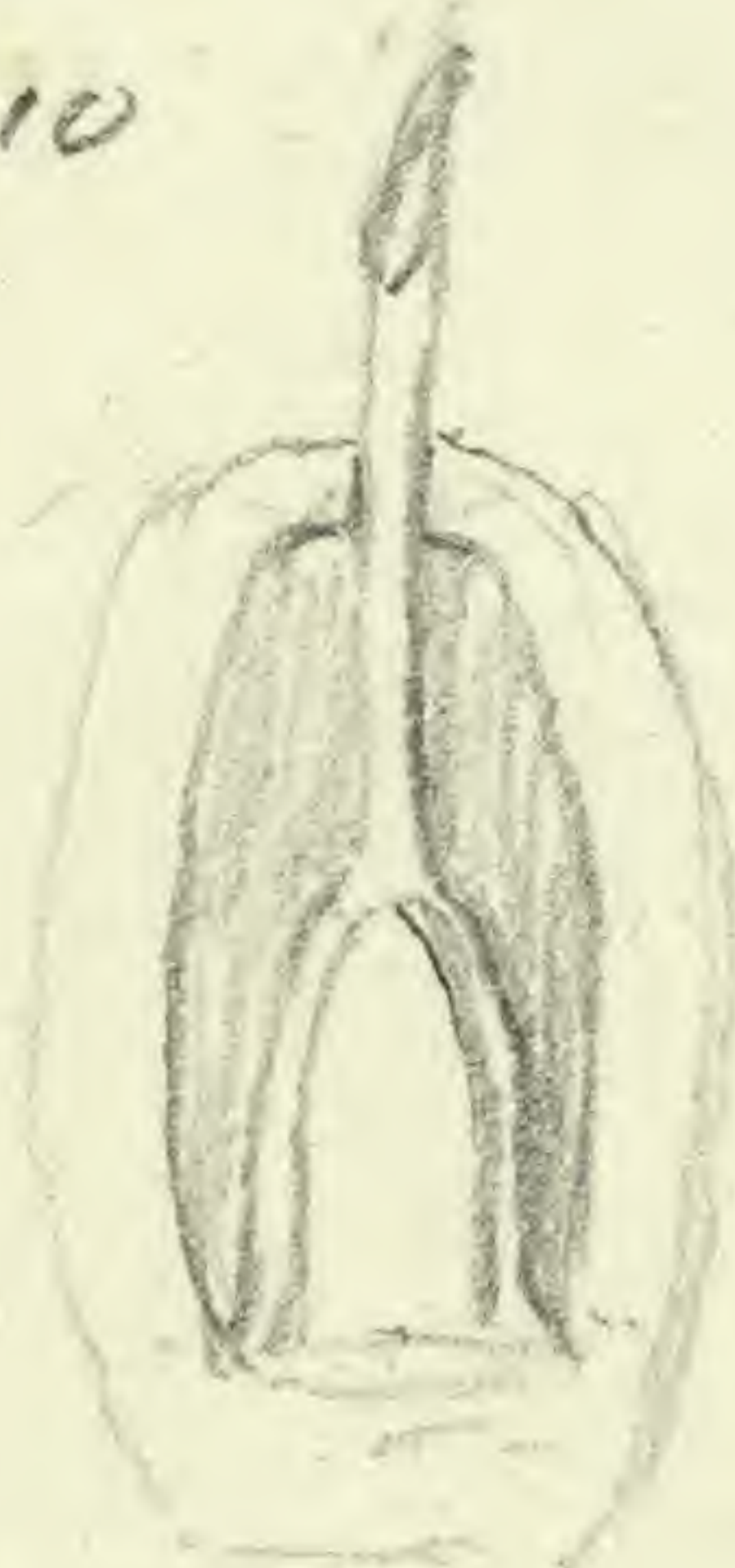
Ephedra Californica

March 1882

S. D. G.



x 10



tip of tube



x 4

ovule & nucleus
within the fleshy perianth
perianth? from a bud

second, interior or real
utricle. thin, membranous
protruded into a slender tube
with an oblique opening
Exterior utricle (perianth?)
fleshy, green, perforated.

innermost scales of
contracted at base



leaves of very
young shoot



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5881 June 1882

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ALEX. LEITCH
APOTHECARY & PHARMACEUTIST
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[Faint pencil sketches of botanical specimens, including a large oval shape and a smaller one, with handwritten notes in German.]



0 1 2 3 4 5 6 7 8 9 10

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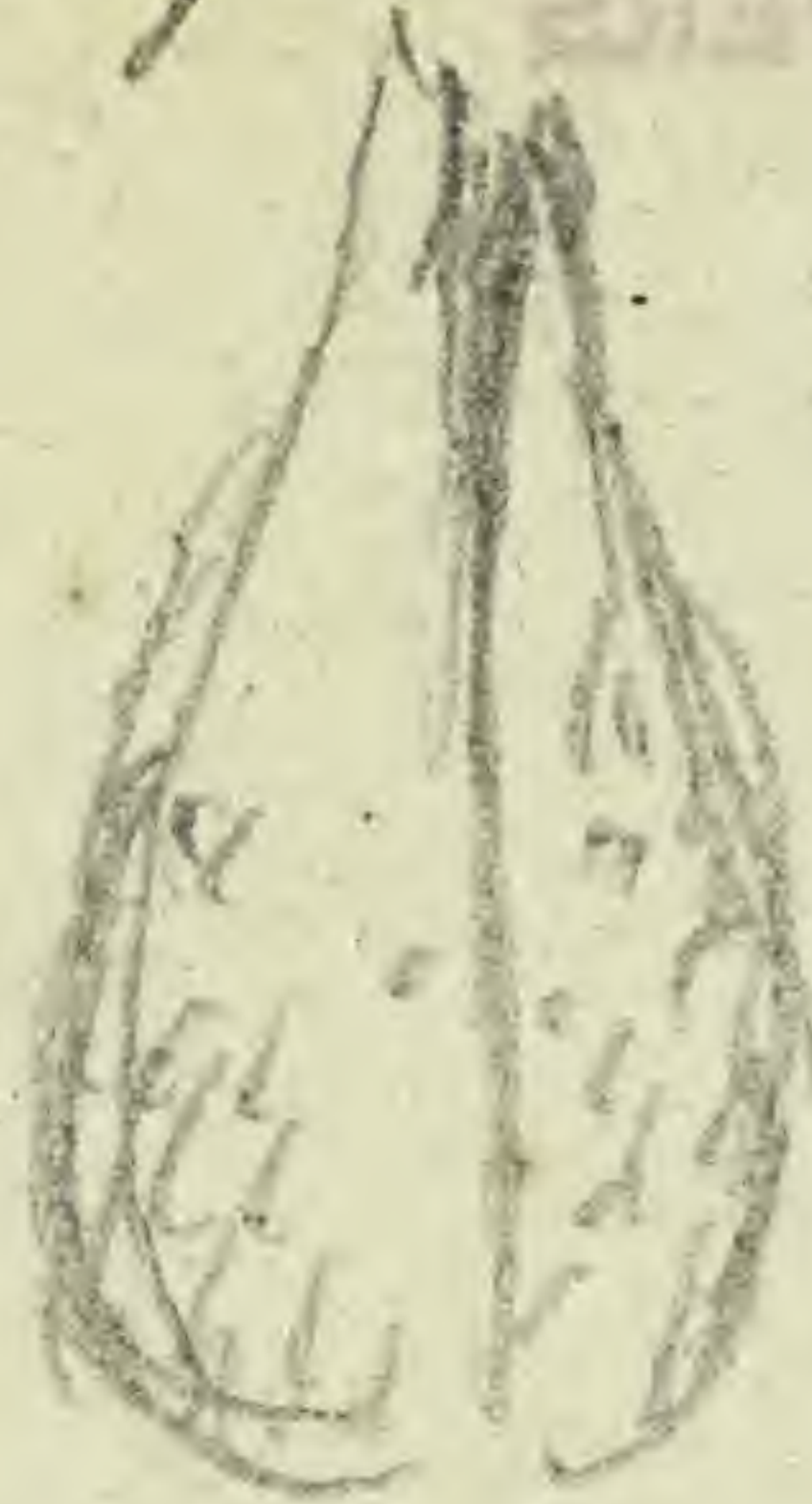
MISSOURI
BOTANICAL
GARDEN

June 17 1882

Ephedra

Wright ^{no} 2882 H. Mux 1881

x 6



seeds
= 2

scales
cont. rooted
below

5 pair of scales
or 5 whorls of 3
scales ternate or binate.
seed single or rarely 2

x 4



leaves ternate in ♀

leaves ternate or binate
on sam. ♀ specimen
male sp. with binate leaves

all the male flowers, with their numbers
have scales in pairs,
the sheath exserted,
anthers 4-6, subsessile on
exserted stipe.



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Cassia smooth dark green
single fruit, stem rough
4 or 5 pairs of scales, inner ones contracted,
or stippled at base, roughish
♀ perianth exserted, all scales but the lowest fertile
slender 5-6 short stippled or pubescent



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